UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/777,415	02/11/2004	Ramkumar Subramanian	ALZ5116USANP	4311

27777 7590 04/25/2008

PHILIP S. JOHNSON
JOHNSON & JOHNSON
ONE JOHNSON & JOHNSON PLAZA
NEW BRUNSWICK, NJ 08933-7003

EXAMINER	
MAEWALL, SNIGDHA	
ART UNIT	PAPER NUMBER
1612	

MAIL DATE	DELIVERY MODE
04/25/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/777,415	SUBRAMANIAN ET AL.	
	Examiner	Art Unit	
	Snigdha Maewall	1612	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *07 January 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-4, 28 and 29* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-4, 28 and 29* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Summary

1. Receipt of Applicant's arguments/remarks and amended claims filed on 01/07/08 is acknowledged.

The obviousness type double patenting rejection made in Office Action dated 09/06/07 has been withdrawn in view of applicant's filing of terminal disclaimer.

Claims **1-4 and 28-29** are pending in this application.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 99/62496 ('496) in view of Jao et al. (US patent no. 5252338) and further in view of Eckenhoff et al. (US patent No. 4717566) and Theeuwes (US Patent no. 4,111,202).

('496) discloses methods and devices for maintaining a desired therapeutic drug effect over a prolonged therapy period. In particular, oral dosage forms that release drug within the gastrointestinal tract at an ascending release rate over an extended time period (abstract). ('496) discloses bilayer and trilayer oral osmotic dosage forms. The bilayer has first component layer comprising a selected drug and excipients for forming a deliverable drug composition when hydrated and a second push layer, comprising a fluid expansion osmopolymer and excipients, contained within the compartment formed by a semipermeable membrane and having an exit means to release the drug. The two layers are compressed together to provide a longitudinally compressed tablet core having a shape of a "capsule shaped configuration. (see page 7, lines 5-17). The trilayer oral osmotic dosage forms include a novel trilayer tablet core surrounded by a semipermeable memberane and having suitable exit means for releasing the drug formulation through the semipermeable membrane. The tablet has a first drug containing layer, a second drug containing layer and a third push layer. During operation, the drug is successively released from the first drug containing layer and then from the second drug containing layer. The drug concentration gradient facilitates the achievement of an ascending drug release rate for an extended time period. Consequently the excipients in the drug-containing layer may be flexibly varied and adjusted for manufacturing convenience and the dosage forms thus exhibit drug release having the desired sustained and ascending rate over an extended time period. (see page 8, lines 1-10). Various drugs that are used are depicted on page 8, lines 25-30. Example 5 depicts trilayer oral osmotic dosage forms having a drug concentration

variance wherein the viscosity of first component was lower than the second which in turn was lower than the third. The example shows an ascending release rate for an extended time period. Sequential compression of various component layers is shown on page 35, lines 15-20).

The reference does not teach delay layer as the first component layer, located adjacent to the exit orifice.

However, Jao et al. teach a dosage form comprising means for delaying delivery of drug from the dosage form following the administration of the drug (see drawing of figure 3-5). On column 4, Jao et al. show how the polymeric delay layer along with the drug in it helps in delaying the delivery of the drug. The polymeric means possesses a slow rate of hydration dependent on the molecular weight and viscosity. The dosage form can take wide variety of shapes such as oral and buccal etc. (see column 5, lines 34-35).

Jao et al. do not teach the convex geometry as claimed in an instant application, however, Eckenhoff et al. teach a dosage form for delivering a beneficial agent with a convex geometry. The dosage form comprises a wall that surrounds and defines an internal space, a composition comprising a beneficial agent, means for aiding beneficial agent for delivering the composition. (see abstract and drawing on the abstract page and fig 30.).

Theeuwes teaches an osmotic system for the delivery of active agent over time. The system comprises a wall surrounding an agent compartment and an osmagent compartment separated by a film and has a passageway through the wall for delivering

the agent from its compartment. (see abstract and the picture depicting convex configuration formed at the time of release.).

It would have been obvious to the one of ordinary skilled in the art at the time the invention was made to incorporate a delay layer in place of first drug component in the dosage form of ('496) based on the teachings of Jao et al. and have an interface boundry between the delay layer and the drug layer having a convex configuration as taught by Eckenhoff and Theeuwes because the delay layer helps in delaying the delivery of the active agents from the dosage forms following the administration of the dosage form to a patient in need of drug therapy and the dosage form with the convex configuration as taught by Eckenhoff and Theeuwes successfully aid in delivering a beneficial agent. One skilled in the art would have been motivated to manipulate the viscosities of drug and the delay layer by the teachings of Jao et al as Jao et al. teaches how the manipulations of viscosities can affect the release rates of the drug.

Motivated by the teachings of various dosage forms with specific geometrical configurations, as discussed in the aforementioned references, a skilled artisan would have prepared a dosage form comprising (a) a membrane defining a compartment, the membrane having an exit orifice formed or formable therein and at least a portion of the membrane being semipermeable; (b) an expandable layer located within the compartment remote from the exit orifice and in fluid communication with the semipermeable portion of the membrane;(c) a delay layer located adjacent the exit orifice; (d) a drug layer located within the compartment between the delay layer and the expandable layer; and (e) an interface boundary between the delay layer and the

drug layer, the interface boundary being convex in shape relative to the exit orifice with a reasonable expectation of success.

4. Claims 28-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 99/62496 ('496) in view of Jao et al. (US patent no. 5252338) and further in view of Eckenhoff et al. (US patent No. 4717566), Theeuwes (US Patent no. 4,111,202) and Physicians Desk Reference of record.

The references cited above do not specifically teach cyclobenzaprine. Physicians Desk Reference teaches that cyclobenzaprine HCl relieves skeletal muscle spasm. It would have been obvious to the one of ordinary skilled in the art at the time the invention was made to make dosage form comprising cyclobenzaprine because of its therapeutic use. A skilled artisan would thus have been motivated to formulate a dosage form as claimed with a reasonable expectation of success.

Response to Arguments

5. Applicant's arguments filed 01/07/08 have been fully considered but they are not persuasive.

Applicant argues that "the cited documents of Eckenhoff *et al.* and Theeuwes also do not show or suggest a convex interface between a delay layer and a drug layer. Presumably these documents were cited based on the illustrations in the drawings of dosage forms, wherein a convex "dense member" (Eckenhoff *et al.)* or a convex film or

membrane (Theeuwes) are shown. .....skilled artisan to imagine a convex boundary between a delay layer and a drug layer, as presently claimed".

Applicant's arguments are not persuasive because as discussed above Theeuwes reference teaches an osmotic system for the delivery of active agent over time. The system comprises a wall surrounding an agent compartment and an osmagent compartment separated by a film and has a passageway through the wall for delivering the agent from its compartment. (see abstract and the picture depicting convex configuration formed at the time of release.) and Eckenhoff"s reference teaches convex geometry. Regarding applicant's arguments that none of the references show the claimed geometry, it is the position of the examiner that only Eckenhoff and Theeuwes references were cited for the convex geometry, not all the references. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.,* 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). It should further be noted that the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981).

Applicant argues that "Presumably these documents were cited based on the illustrations in the drawings of dosage forms, wherein a convex "dense member" (Eckenhoff *et al.)* or a convex film or membrane (Theeuwes) are shown. However, the dense member of Eckenhoff *et al.* is not a delay layer, and is not positioned between a drug layer and the exit orifice."

The rationale behind this argument is not entirely clear to the examiner because whether in picture or in description, the references teach the required features of recited instant claims. Even assuming that the reference does not suggest convex shape in text, the examiner points out that brief description of Fig. 13 on page 34, paragraph [000125] of instant specification indicates only an **optimal performance.**

([000125] Figure 13 illustrates the resulting layer interfaces from the present invention. The traditional compression sequence is inverted, reversed, such that the natural shape of the layer interfaces from compression is inverted to be convex relative to the exit orifice for optimal performance.)

It is the position of the examiner that optimum performance is not an unexpected result. The rejection is therefore maintained.

6. THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Snigdha Maewall whose telephone number is (571)-272-6197. The examiner can normally be reached on Monday to Friday; 8:30 a.m. to 5:00 p.m. EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frederick Krass can be reached on (571) 272-0580. The fax phone number for the organization where this application or proceeding is assigned is 571-273-0580.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Snigdha Maewall/

Examiner, Art Unit 1612

/Gollamudi S Kishore, Ph.D/

Primary Examiner, Art Unit 1612